DOCUMENT RESUME

ED 415 350 CE 075 471

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TITLE Learning in Smaller Companies. Final Report.
INSTITUTION Stirling Univ. (Scotland).; Falkirk Coll. of Further and Higher Education (Scotland).; Clackmannan Coll., Alloa (Scotland).
SPONS AGENCY Department for Education and Employment, London (England).
ISBN ISBN-1-85769-039-7
PUB DATE 1996-03-00
NOTE 51p.; For a related document, see CE 075 470. Funding also received from the Forth Valley Enterprise, Stirling, Scotland.
AVAILABLE FROM Educational Policy and Development, University of Stirling, Stirling FK9 4LA, Scotland (12.50 pounds).
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Articulation (Education); Case Studies; Competency Based Education; Conventional Instruction; *Education Work Relationship; Foreign Countries; Higher Education; Portfolios (Background Materials); Professional Development; Program Development; Program Effectiveness; School Business Relationship; *Small Businesses; Student Evaluation; Two Year Colleges; *Work Experience Programs
IDENTIFIERS *Scotland

ABSTRACT

The Learning in Smaller Companies (LISC) project was undertaken to develop links between academic institutions and work-based learning in Scotland. The University of Stirling worked with Falkirk College and Clackmannan College to create a number of work-based learning schemes for employers in small and medium-sized enterprises. The programs were designed for delivery at various academic levels from pre-higher to postgraduate education and in a range of modes, including traditionally assessed courses and portfolio schemes based on accreditation of competence. The LISC project emphasized flexible delivery schemes compatible to employers' needs and an overall framework that is based on accreditation of competence. The following programs have been delivered through the LISC project: Scottish Vocational Qualifications; Scottish Vocational Education Council National Certificate modules; Higher National Certificate qualifications; University Access courses; and the postgraduate Certificate in Small and Medium Enterprise Management. During the past 2 years, 28 companies within the geographic area covered by Forth Valley Enterprise have participated in the project. The project has attracted small and medium-sized firms from a wide range of industrial and commercial sectors. (Appended are lists of steering group and focus group members and project outputs and dissemination activities. The bibliography contains 25 references.) (MN)

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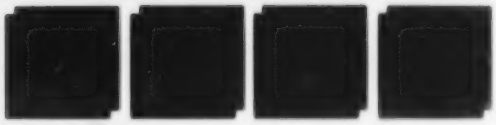

LEARNING IN SMALLER COMPANIES

University of Stirling
Innovation and Excellence

Falkirk College
of Further & Higher Education

FINAL REPORT

March 1996

CLACKMANNAN COLLEGE

Improving Business Performance Through Employee Development

Forth Valley Enterprise

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ACKNOWLEDGEMENTS

The project partners express their sincere thanks to all members of the Steering Group, the Focus Groups, Employers and Learners who have participated in the project. The support of the funding agencies, the Department for Education and Employment (DfEE) and Forth Valley Enterprise (FVE) is acknowledged. We would particularly mention the support and advice of David Pierce as the DfEE project manager.

A successful Conference was held early in December 1995. Rather than produce separate conference proceedings, material from the various participants is included in this report. We take this opportunity to express our thanks to the main conference speakers, namely: Ron Gow, Assistant Director, CBI Scotland, Dr Colin Gray, Small and Medium Enterprise (SME) Development, Open University Business School, Stephen Creigh-Tyte, UK Co-ordinator for European Observatory on SMEs (1993/94) on behalf of Warwick University Business School, now Chief Economist at the Department of National Heritage, and Professor Michael Scott, Professor of Entrepreneurial Studies, University of Stirling.

We wish to express our gratitude to the company owners and managers who gave valuable time to support the conference and also the learners from the companies who took time off work to contribute.

ISBN: 1 85769 039 7

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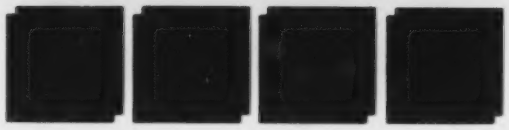

LEARNING IN
SMALLER
COMPANIES

FINAL REPORT

March 1996

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Published by: Educational Policy and Development, University of Stirling,
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PARTNERS

The LISC project is a collaborative project between partner institutions. This allowed a range of provision to be offered to partner companies.

- **Falkirk College of Further and Higher Education and Clackmannan College** offer both further and higher education with the provision of Scottish Vocational Education Council (SCOTVEC) National Certificate (NC) modules and SCOTVEC Higher National (HN) units. Falkirk College, under the auspices of the project, offered Accreditation of Prior Experiential Learning (APEL) for NC modules and HN Units and developed packages for work-based delivery of Financial Accounting Statements and IT Applications. Scottish Vocational Qualifications (SVQs) are also an important part of the Colleges' provision

- The **University of Stirling** provides two partners within the project. The **Division of Educational Policy and Development (EPD)** plays a major role in introducing new approaches to education in the University and, in particular, is responsible for facilitating adult access to higher education. For instance, it is responsible for the provision of a range of undergraduate degrees targeted at adult students which are available entirely by evening studies. Within the project it applied a portfolio-based Access programme to the SME context; to further extend alternatives available to individuals and companies LISC worked in co-operation with another work-based project based in Educational Policy and Development - the Learning at Work (LAW) project. This offered an Access course taught in the work-place, and was suitable for those who did not have the opportunity within their jobs to display the skills and knowledge required for the portfolio route. EPD was also responsible for the overall management of the LISC project.

  The second University partner is the **Scottish Enterprise Foundation (SEF).** The particular expertise of SEF concerns entrepreneurship, including working with SMEs and it has extensive experience in the synthesis of on-campus education and training and work-based learning. Within the LISC project it developed a work-based delivery of the post-experience Certificate in Small and Medium-Sized Enterprise Management.

- The Central Scotland Local Enterprise Company (LEC), **Forth Valley Enterprise,** have provided additional funding for the project, in order to support contact with SMEs within the Forth Valley area. The LEC has been represented by Forth Directions. **Forth Directions** is the LEC's High Street outlet which promotes vocational guidance and provides information and advice on training and educational opportunities to both individuals and companies.

- Over the life of the development work learners from the following companies have been involved:

Avery Dennison (UK) Ltd
Caledonian Freight Ltd
Facilities Support Services Ltd
John Gow and Sons
Hi-Fas Engineering Supplies Ltd
The Lake Hotel
A McCowan and Son Ltd
McWatt, Turnbull and Holden
Ogilvie Management Services Ltd
Tenma (UK) Ltd
Borg-Grech Photography
Clachan Cottage Hotel
Foseco (FS) Ltd
Harvey Map Services Ltd
Key Housing Association
Marshall Construction Ltd
McLean and Nuttall
Mulberry Bush Kindergarten
The Taylor Group
United Closures and Plastics Ltd

FOREWORD

Learning in large companies should not be a problem. The scale of some companies allows them to set up excellent staff development schemes because the overheads associated with these are affordable since they are a small fraction of the annual turnover. So affordable indeed that in some cases really large, specialised companies such as Motorola in the USA can more or less set up their own university which offers a range of courses of direct value to the staff as employees of that particular company. The companies can afford to hire the specialist teaching staff and they can control the curriculum.

With small companies it is completely different. No SME can set up a full offering of staff training on its own and the result can be highly disadvantageous to the staff who are not readily able to develop their careers and also to the companies who risk becoming ossified in their procedures.

The LISC project was set up because the problem was appreciated by Department for Education and Employment and Forth Valley Enterprise, and they found funding to support the University of Stirling, Falkirk College of Further and Higher Education and Clackmannan College in efforts to find mechanisms to enable SME's to get round the limitations of size. These organisations have a first-class reputation for training and, in addition, the University is very active in improving access to Higher Education. This report gives an account of the achievements of the project and I wish to congratulate both the sponsors and the grant-holders on their contribution to the problem, particularly their production of a set of guidelines for learning advisers in SMEs who support participants in work-based programmes. There are recommendations on recruitment of both companies and individuals to the task, on delivery of work-based programmes and on the required infrastructure for the institutions involved.

No doubt there is much more to be developed, but I hope this report will act as a stimulant to a practice which is essential if individuals, companies and the nation are to get the most out of work.

Professor Andrew Miller
Principal & Vice Chancellor
University of Stirling

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ABOUT THIS REPORT

Chapter 1

A detailed explanation of the background of the LISC project, issues facing higher education in developing industry links, and the particular case of Small and Medium Sized Enterprises is given in the LISC Interim Report (April 1995). Section 1.1 of this Report gives a briefer introduction with some additional material related to SMEs not already included in the Interim Report; 1.2 gives a descriptive overview of the project and 1.3 summarises issues raised during the initial development stage and reported in the Interim Report.

Chapter 2

This comprises three case studies each focusing on the distinct areas of delivery of work-based learning which emerged from the project. The first is the delivery of Scottish Vocational Qualifications (SVQs), SCOTVEC National Certificate (NC) Modules and Higher National (HN) Units by Falkirk College. The second is about the Portfolio-based Access course, which recognises people's skills gained in the workplace as equipping them to progress to degree level study. The third case study presents the delivery of the work-based mode of the post-graduate/post experience Certificate in SME Management. These were explained briefly in the Interim Report. Each case study sets the development work within the context of the partner's overall provision, outlines the innovative work undertaken by means of the project support, explains the approaches to work-based learning, includes examples of companies and learners, presents factors which, in their context, have encouraged or inhibited success, and reflects on embedding issues including costs.

Chapter 3

This section reports on the final evaluation exercise which was carried out during January 1996 with employers and learners.

Chapter 4

Educational Policy and Development was carrying out a study of learner characteristics of a variety of adult learners including socio-economic factors, motivation and barriers to participation. The opportunity was taken to include those recruited to LISC in this survey and some of the findings related specifically to those recruited to programmes designated work-based learning are reported in this chapter.

Chapter 5

Chapter 5 summarises the issues which have emerged throughout the development work, presents conclusions and makes recommendations.

1 The Learning in Smaller Companies (LISC) Project

The Learning in Smaller Companies (LISC) Project is one of a suite of projects funded by the Department for Education and Employment (DfEE) to develop links between academic institutions and industry, focusing in particular on the relationship between academic and work-based learning. Additional funding was provided by the Central Scotland Local Enterprise Company - Forth Valley Enterprise (FVE).

In the LISC Project, the University of Stirling together with Falkirk College and Clackmannan College have created a number of work-based learning schemes for employees in small and medium-sized enterprises (SMEs). These programmes are delivered at a variety of academic **levels** from pre-Higher Education to post-graduate and are available in a range of **modes**, including traditionally assessed courses and portfolio schemes based on the accreditation of competence. The overall philosophy in the LISC programme has been to design flexible schemes of delivery compatible to the needs of employees, and an overall framework has been created that is transferable to other institutions and providers. The programmes delivered in LISC are Scottish Vocational Qualifications (SVQs), Scottish Vocational Education Council (SCOTVEC) National Certificate (NC) modules and Higher National (HN) qualifications, a University Access course and the post-graduate Certificate in Small and Medium Enterprise Management (CSMEM).

Over a 2 year period, 28 companies mainly within the geographical area covered by Forth Valley Enterprise have participated in the project. These firms have been drawn from a range of industrial and commercial sectors and include those ranging in size from the micro-level to the upper limit of medium-sized enterprises.

2 Characteristics of Companies

A set of characteristics of participating companies has previously been noted in the Interim Report of the project (Osborne et al 1995) and has been further revised in the light of ongoing work. These are:

- The existence of *champions* appears to be important to the successful initiation of a work-based learning scheme. These champions are typically senior individuals who value education and training and are influential within their organisations.
- Training and development is intimately associated with initiatives such as *Investors in People* and/or ISO 9000. Those champions with the vision for development are more likely to involve their company in work-based learning schemes.
- Those participating companies with Human Resource Management policies in place could best judge the effectiveness of the LISC programme to their needs.
- In some of the participating companies, personal development is valued as equal to or even more important than short term needs. There is the perception that fulfilling the personal development needs of individuals may have longer term beneficial effects on individual and hence company performance. Furthermore, education and training are seen as being important in the motivation of employees and as such makes them more adaptable.
- Some participating companies were simply willing to try the work-based approach for their employees as an alternative to traditional approaches, though others were sceptical about its benefits. For some it has proved to be beneficial and they would participate again and recommend it (have recommended it) to others

- While some company managers were less interested than the employee in qualifications as a result of a programme of learning, qualifications based in the workplace are more likely to gain the support of the employer.

- Some companies were attracted to the Certificate in SME Management (CSMEM) because, having identified the need for general management development, they had not previously encountered a custom-designed qualification focused on SMEs.

3 Individual Participants

At the level of the individual, some 70 potential recruits were identified of whom 46 started on work-based programmes. An analysis of the socio-demographic and motivational characteristics reveals that the LISC programme has been able to target those who do not traditionally participate in continuing professional development. There is some evidence that learners on LISC predominantly are those who had been considering returning to study, but had not found a suitable programme. There is thus some indication that the project is tapping a reservoir of latent demand.

4 Outputs of Project

As a result of the project a number of material products have emanated which may have applicability to others planning to deliver similar programmes. These include the following:

- a set of **guidelines for learning advisers** in SMEs who support participants in work-based programmes;
- a **skills portfolio** designed to provide a model for the efficient identification of the core competencies of learners - the methodology underpinning this process has the spin-off of being identified by some employers as a general tool for the appraisal of a wide range of employees;
- a **study skills guide** customised for workplace learners;
- a set of **open learning materials** to support the delivery of the Certificate in Small and Medium Enterprise Management.
- an **Employers' Report** written from the perspective of managers and owners within participating companies
- an **Interim** and a **Final Report**

5 Conclusions and Recommendations

At an institutional level the experience of developing the various elements of the LISC programme has resulted in there being a focus on the means whereby work-based programmes can be embedded into ongoing provision. A range of issues have been identified that informs further development and are listed below together with a set of recommendations.

5.1 Recruitment of companies to work-based programmes

In general there is no apparent difference between the objectives of companies involved in the LISC project and companies undertaking any form of training and development activities. There are no easy ways of recruiting smaller (or indeed larger) companies to such schemes. Although there are a number of factors that appear to mediate company participation, a number of issues appear to be pre-eminent:

Rapid growth companies tend to recognize that they require a range of skills in their organisations and also that these may not always be evident in their original staff. There are a number of ways that this problem can be solved: replacing existing staff, using outside advisers or developing existing staff to equip them with the skills needed in the growing business (or a combination of all three). Often it is management or other vocationally related programmes that are most needed in these situations.

Recommendation 1: Providers should develop niche products (eg CSMEM) that are particularly relevant to this target group of companies.

Companies in mature markets and in markets where they face intense competition are striving for the means to achieve competitive advantage. They will look to developments such as re-engineering, becoming world class manufacturers, TQM and empowerment to help them survive and prosper. They are likely, therefore, to be in a period of rapid change. It is these types of businesses that are consciously or unconsciously developing learning organisations.

Recommendation 2: Companies in mature markets or in markets where competition is intensive are likely to be looking at ways to stimulate the development of employees. Broadly-based workplace learning and the wider range of types of programmes delivered in LISC have greatest appeal in these organisations and there should be targeting to this market.

However, moderate growth companies or those in the early stage of growth may not recognize the need for the longer term solutions highlighted above. They are looking for rapid pay-back from their training/education. In these situations some of the time-scales involved in workbased learning and certainly the aspects associated with accreditation may act as a deterrent to them undertaking this type of development.

Recommendation 3: The targeting of all growth companies regardless of their stage of growth may not be worthwhile.

The identification of a champion within the company who often may have a strong view that employees' personal development is as important as corporate needs. It is clear that such champions do not exist in the majority of companies, and that where they exist that firm is likely to have a commitment to human resource development through the adoption of a quality framework such as Investors in People.

Recommendation 4: Companies which have a commitment to human resource development through the adoption of a quality framework such as Investors in People are recommended targets for the cornerstones of future initiatives, and clearly more companies must be encouraged to adopt people-centred quality arrangements.

5.2 Recruitment of individuals to programmes

This may be as viable an option as working through companies themselves, and this is the case particularly in relation to programmes within higher education without immediate vocational relevance. Analysis of the motivational characteristics of participants indicates that cognitive development is a strong a factor as self-advancement.

Recommendation 5: Work-based learning is one way in which Lifelong Learning, with a focus on what the European Commission's White Paper on Education and Training (EC 1995) terms "reintroducing the merits of a broad base of knowledge", can be achieved. It may be that a narrow interpretation of the function of work-based learning may lead to exacerbating the "risk of a rift appearing between those who are able to interpret, those who can only use, and those who can do neither" that the Commission perceives to be possible. Marketing of programmes directly to individuals through conventional means such as newspaper advertising may be more effective in attracting those whose primary motivation is cognitive development.

5.3 Delivery of work-based programmes

Even with the commitment to the programme and the *champions* within, there is little evidence of companies being willing or able to adjust their work loads for employees to assist them to complete. This was the major feature of those who withdrew from programmes and clearly for many of the remainder work commitments has put a strain on their capacity to complete.

The major attributes of work-based learning are relevance, the opportunity to reflect and flexibility of delivery. The methods and procedures for undertaking work-based learning and accreditation do not, however, necessarily ease the strain on companies and individuals undertaking this form of development unless companies are willing to make a commitment to front-end investment in terms of time, finance and human resources. There is a clear danger that work-based learning may be perceived by companies as a quicker and easier method, whereas, in some cases, it can create greater demands than those of conventional courses.

Of particular importance is the existence of appropriate trained individuals within the workplace who can act as learning advisers, and champion developments at a operational level. It is equally important to detect the influence of the *anti-champions* that we have identified in some firms who block development of work-based schemes.

Recommendation 6: Participating companies and learners should not be over sold on this method of education and development and care needs to be taken in examining with them that work-based learning is appropriate to their needs. Whilst emphasis must be placed upon the benefits of learning in the context of work itself the reality of commitment of time and resources must be stressed.

Recommendation 7: *Champions* at various levels within companies must be identified and developed, and those firms with a quality framework are most likely to create a structure to accommodate such arrangements. These structures should also be capable of identifying any impediments created by *anti-champions*.

Recommendation 8: Training programmes for learning advisers in smaller companies must be integrated into every work-based learning scheme and it may be that such training should take an accredited form.

Recommendation 9: Alternative methods to those associated with portfolio development need to be further explored. There are opportunities for a mix of more conventional assessment such as assignments based on the workplace, observation and questioning/interview methods to be considered also. We need to find ways of reducing what appears to some participants to be time-consuming and bureaucratic methods of assessment.

5.4 Individual Commitment

The success or otherwise of this approach appears to depend crucially on the commitment of the individual learners. In order to demonstrate appropriate and assessable skills and knowledge, they have to reflect on work practices and to put considerable effort into achieving a satisfactory end result. It appears that some people are not able to adjust to this approach to learning. Where the adjustment to the work-based learning approach is made then it appears that individuals and companies benefit with personal skills and company effectiveness being improved.

Recommendation 10: It is vital that all potential participants in work-based schemes receive appropriate pre-enrolment guidance. It may therefore be advisable to design a pre-start programme for anyone intending to pursue work-based learning to judge their ability to be able to reflect on their work and place into context of the qualification they are taking. The *Recognising Personal Skills* (Dockrell, Seagraves and Neal 1996) questionnaire provides a good model.

5.5 Cost

The rate that companies say they are prepared to pay for these types of development programmes is clearly below the commercial rate of educational institutions and does, therefore, raise issues for the future embedding of the range of courses available for SMEs from institutions. Furthermore, most work-based learning developments have been funded by government awards, but when that money is exhausted institutions have been given no incentives that steers them to continue such activities. If FTE targets can be met by recruiting traditional students to traditional courses then planning using appropriate financial levers may be needed to fulfil any policy to promote work-based provision.

Recommendation 11: It is likely to be difficult to obtain full commercial rate fees for the work-based learning approach with its heavy involvement of individual/personalised tutoring and assessment. The tax break incentives that apply to the obtaining of vocational qualifications should ideally apply to all forms of learning being undertaken or at the very least any work-based activities.

Recommendation 12: Attention by the Scottish Office Education and Industry Department (SOEID) and the Scottish Higher Education Funding Council (SHEFC) to equitable funding of part-time provision (both of institutions and students) and the means by which work-based provision can be calibrated would create the impetus for ongoing developments. It may be that funding councils should offer a greater unit of resource to work-based provision to stimulate supply. One strategy would be to provide a work-based learning incentive grant comparable to the part-time incentive grant that SHEFC makes available to institutions.

5.6 Institutional infrastructures

It is important that the institutions are set up to deliver the programmes on offer, have their procedures in place and have champions at strategic and operational level behind the projects. Failure to do this leads to frustration on the part of the learners and eventual antipathy to the whole process of WBL by both learners and employers.

Recommendation 13: Before undertaking any work-based learning and accreditation the Higher or Further Education Institution should ensure that all its procedures are in place and that all members of staff who will implement the programmes are fully committed to the approach.

The expertise and knowledge of Scottish Enterprise Foundation with regard to SMEs and how they operate were particularly appreciated by both the learners and employers in the companies who participated in the CSMEM.

Recommendation 14: The existence of units with a special focus on SMEs working in co-operation with other departments within institutions, particularly those with a remit for the co-ordination of continuing education, is of great benefit.

In the University sector there are extensive initiatives in developing flexible approaches to teaching and learning using new technology, for example the Teaching and Learning Technology Programme (TLTP 1995/1996) and Regional Strategic Initiative (RSI) (SHEFC 1995) developments. As Universities develop increasing numbers of computer based learning programmes, and explore the potential of the Internet for both tutor-student and student-student interaction, new opportunities will open up for work-based learning. This, of course, presents and whole new range of learning needs in helping individuals and companies to adapt to such approaches to learning.

It would be dangerous to presume too much, too soon for new technology. Small companies will adopt new technology at varying rates. Only one of our partner companies has become fully operational with external e-mail and Internet links, and that only recently. There is, therefore, need to continue to develop non-technology based provision. However, there are initiatives to encourage small companies to pursue the use of new technology for developing their own products and markets, and it is not a huge step to accessing training and development.

Recommendation 15: There is no direct recommendation out of the experience of the LISC project, but a strong awareness of the rapid development of new technology. Educational and corporate partners of learning agreements need to adopt and adapt to new technology.

1 INTRODUCTION

1.1 Context of LISC Project

The **Learning in Smaller Companies Project** is one of a group of development projects funded by the Department for Education and Employment (DfEE) to develop links between academic institutions and industry, with a particular emphasis on the recognition of work-based learning.

❑ *Work-based learning*

The development of work-based learning has two primary aims: the economic goal of improving company performance through improving the performance of the workforce; closely related is the issue of widening access to educational opportunities to people in employment who would not normally pursue studies via traditional routes.

Work-based learning, by its very name, is to do with learning linked to the requirements of people's jobs. However, the activities which occur under the banner of work-based learning are many and varied. It is perhaps helpful to conceptualise it as

a) learning **for** work
b) learning **at** work and
c) learning **through** work.

Learning **for** work is broad and includes anything which can be labelled vocational. It can be delivered in school, college, at home, from television or at work. Learning at work would relate to training and development delivered in-company. It could be delivered by company personnel, consultants or staff from educational establishments. Both Learning **for** and **at** work to be useful need to be reinforced **through** work. Learning **through** work is integrated into the doing of the job; it includes the application of job-related learning acquired elsewhere and the skills and knowledge which are acquired in the process of doing the job.

It is the area of learning **through** work which has exercised work-based learning developments the most in recent years. The concern has been to establish frameworks for recognising such learning and encouraging learners in the process of reflection which enables them to both articulate and evaluate the learning which has occurred. A mechanism for awarding credit needs to be established for learning which has been articulated and recognised.

Taking learning which is delivered separately from the process of doing a job requires an analysis both of the job and the learning to ensure it is applied and produces the intended change. In much provision this *transfer* stage is not often formalised or subjected to assessment. To build that into the process of course delivery and assessment is one approach to allow recognition for learning through work.

Taking learning which has occurred without formal input but has been achieved in the process of doing a job also requires serious reflection on the part of the individual and a framework which allows it to be assessed and accredited.

The LISC project has been concerned with the recognition and accreditation of people's prior experiential learning, delivering new learning in a way suitable to people employed in small companies and with the integration of 'taught' material into work practices.

❑ *Small and Medium Sized Enterprises*[1]

In 1993 there were around 3.6 million businesses in the UK of which 99.91% had fewer than 500 employees, representing 63% of all non-government employment. Those defined as micro-businesses, that is with 9 or fewer employees make up 94% of all businesses and account for 50% of all non-government employment (DTI 1995). These include those companies which have zero employees, that is the self-employed with no employees.

Small businesses are an important source of new job creation. During the period 1989-1991 the percentage of employment dropped in firms with over 500 employees (the largest drop being in the 1000+ sector). The highest proportion of new jobs were in firms with 9 or fewer employees (DTI 1994).

If there is to be an improvement in the overall performance of the work-force through encouraging education and training is it clearly vital that employees in the SME sector are given access to development opportunities.

Linking Education and Training to Productivity: Evidence that education and training leads to improved productivity can be found in comparative studies between similar organisations in different countries. Steedman and Wagner (1989) report on comparisons made in clothing manufacture in Britain and Germany. It was found that the more highly skilled German workforce, for comparable samples of clothing, produced an average output per employee twice that of the British workforce. The higher productivity was a result of fewer errors, greater adaptability to new styles and hence less time in learning new techniques and better awareness of problems, how to identify them early in the production process and how to avoid them. There was more effective supervision and less downtime because of fewer breakdowns in equipment. This was seen to be a greater problem in Great Britain because of less effective mechanics. Similar findings had occurred in studies undertaken in matched metal working and woodworking plants.

A similar study was undertaken for comparable medium sized hotels (10-100 rooms) (Prais, Jarvis & Wagner 1989). German hotels required about half the staff per guest night than British hotels. The main area of difference was the better qualified supervisory staff, who operated with greater responsibility than their British counterparts.

Campbell (1995) quotes numerous such examples of comparative studies and summarises the benefits which accrue from higher level skills and which lead to higher quality products and higher productivity. They are:

more flexibility
lower machine downtime
higher quality standards
lower manning levels
wider organisational/technological responsibilities
less produce wastage
easier introduction of new technology (Campbell p13)

SMEs and Growth: These studies assume a certain size of organisation with levels of supervisory staff in place. There is evidence that many small companies are not growth oriented and that survival or stability is their main concern, rather than growth which would contribute to the economy (York Consulting 1993, Gray 1994). Indeed many of the micro-companies are self-employed individuals with no employees and for many the main concern is remaining off the unemployment register. Gray cites the following figures: the self-employed and *mini* firms of 5 or fewer employees make up 83% of all firms, 19% of all employment but 9% of the GNP. Firms of 100 to 500 employees account for 1% of all firms, 22% of employment and 32% of the GNP. Thus medium-sized firms are contributing more to the economy and the requirement is not to create more micro-firms but to encourage growth from small into medium sized enterprises.

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[1] When the project began, we accepted the definition of SMEs as being enterprises with fewer than 500 employees, and also accepted the *corporate* SME (that is those which are more than 25% owned by a larger organisation, but are autonomous in operation) as being eligible to participate in our programme (see Osborne et al, 1995). In the interim more precise definitions have emerged including the concept of the *micro* firm. The latest proposed definition from the European Commission, as at February 1996, for firms to qualify as SMEs is to be based on a number of employees, independence, turnover and balance sheet total. With regard to number of employees *medium* is defined as more than 50 and less than 250 employees; *small* means less than 50, and those with less than 10 are classed as *very small*. To be classed as an SME not more than 25% of the firm may be owned by a large company. (Cordis Focus, 1996)

A key issue is helping owners and managers to develop both the vision and the skills for growth. Gray indicates that formal management education and the skills associated with it are a factor in business growth. However the acquisition of these skills seems to be driven by two different types of motivations: those that promote SME growth and business efficiency and those linked to economic survival. The requirement is for the focus to be on the first motivation. "Well developed personal and management skills, presented in a mode and manner likely to attract existing SME managers, could remove or lessen some of the impediments blocking a growth-oriented firm from moving from the small band into the medium-sized where the firm's economic impact becomes significant and modern management techniques can be applied more effectively." (Gray 1994). However, he reiterates that few small firm owners actually wish to pass through the necessary stages of growth to become managers of medium-sized organisations. There is a need to raise personal levels of aspiration through appropriate education and personal development.

At a European level the European Commision recognizes within the White Paper on *Education and Training* that there exists "Inequalities in access to training between different types of companies and groups of employees" and "in particular, this works to the disadvantage of workers in SMEs and under or unqualified workers" (EC 1995). Initiatives such as the Leonardo scheme relate directly to vocational training priorities of the EC and place great emphasis on improving the training opportunties of those working in SMEs. The *Education and Training* White Paper clearly develops priorities previously identified in the White Paper *Growth, Competitiveness and Employment* (EC 1993).

Government Support: The White paper *Competitiveness: Forging Ahead* (1995) and *Helping Smaller Firms* (1995) emphasised the importance of the SME sector and outlined the goverment's support to *smaller firms*. In England the emphasis is on support through Business Links and TECs (Training and Enterprise Councils) and in Scotland through LECs (Local Enterprise Companies) which supply advice in a range of areas. Other main areas of support are the development of management training, the support of innovation and technology and the encouragement of expansion into export markets.

Previous work-based learning projects had, in the main, developed partnerships with larger companies such as local authorities, health trusts, the Ford and Rover motor companies. The Division of Educational Policy and Development at the University of Stirling had developed work-based learning partnerships with two local large companies - Zeneca FCMO and Oki (UK) Ltd. The Scottish Enterprise Foundation's focus is on the SME sector. The LISC project set out to develop partnerships specifically with SMEs and in the process explore the needs of this sector, particularly within Central Scotland, and to report on emerging issues.

1.2 The LISC Programme

❑ *The Project*

The LISC Project was funded by the Department for Education and Employment for the period April 1994 to December 1995. The project was planned in distinct phases:

Phase one: establishing links with SMEs, identifying learning and development needs, identifying individual learners and those within the companies who could support them. (At the beginning of the project we used the term *mentor*, but we later changed this to *learning adviser* - see below.) The identification of partner companies for the development work concentrated on Central Scotland. Prior to and parallel to the establishment of company links was the identification of appropriate provision in the partner institutions and the establishment of procedures and frameworks for delivery.

Phase two: delivering the negotiated programmes and working with the mentors; continuous monitoring and evaluation of the activities was seen as a priority. Evaluation activity involved not only reviewing what was actually happening with those who had become involved, but speaking with those who had opted not to become involved. Follow up work was undertaken with two groups of non-participants, namely those who had received material but had made no further enquiries and those who had enquired further but who still did not choose to become involved. This work was reported in the Interim Report, which was one of the projected outcomes of this phase of the project activity. The work of the project at this stage was also disseminated through a mid-project seminar.

Phase three: further recruitment of a second *cohort* of companies and learners; this was to include new learners from already participating companies and new companies.

Phase four: final evaluation and reporting.

The project work did, by and large, follow the projected phases, although the final evaluation and reporting extended beyond the funded life of the project. In practice, however, recruiting groups of learners in distinct phases proved unrealistic. The lead-in time from a company receiving information about the programme, the discussion stages, the negotiation of programmes and learners starting on programmes was variable but usually lengthy. After the initial recruitment drive, companies and learners became involved at different times and while some have completed their programmes, at the time of writing, many are ongoing.

This section presents a descriptive overview of the activity of the LISC Programme. The case studies in Chapter 2 provide greater detail.

❑ *Company Recruitment*

The team used many approaches to publicise the programme: mailshots to carefully selected, named individuals in companies; leaflets through various outlets - Industrial Training Organisations, Forth Directions, Business Shops, libraries; seminars by invitation; newspaper advertising; items in local newspapers including the Chamber of Commerce Bulletin; local radio; circulation of our project newsletter and personal contacts.

Table 1.1 summarises the outcomes of this activity. Table 1.2 analyses the information related to the companies, according to size and activity, who got as far as identifying learners. Table 1.3 relates to those companies who have learners who have completed programmes or who have learners in ongoing programmes.

It should be noted that these figures represent all companies and individuals recruited throughout the period of the funded project. About two-thirds were recruited in the first and second phases of the project with the remaining one-third in the later stages of the project.

Table 1.1 Company response to publicity

Enquiries	around	70
Followed up in depth eg seminars, visits, lengthy discussion		50
Recruited to point of identifying learners and possible programmes		28*
Active participation		21*
Still involved (Learners either completed or ongoing)		14

* Some companies had identified one learner only and if this person did not progress at any stage, company participation ended. See table 1.2 for more detail.

Table 1.2 Size and Activity of Companies who identified potential learners

	201+	101-200	51-100	21-50	20& below	Total
Manufacturing	2(1)	1	4	2(1)		9
Construction		1(1)	1		1	3
Hotels					2	2
Freight				1		1
Care Services	1				1	2
Service/Supply		1(1)	1	1	6(2)	9
Other			1(1)		1	2
Total	4	3	6	4	11	28

The figures in brackets indicate those who did not proceed beyond the initial recruitment stage. Reasons for non-progression:

- individual deciding not to go ahead
- difficulty in provider arranging suitable programme
- company found a preferred opinion

Table 1.3 Companies with learners still involved

	201+	101-200	51-100	21-50	20& below	Total
Manufacturing	1		4	1		6
Construction					1	1
Hotels					1	1
Freight					1	1
Care Services						
Service/Supply			1	1	2	4
Other					1	1
Total	1		5	3	5	14

❑ *Learner Participation*

Ongoing involvement in the programme for companies very much depended on the commitment of the individual learners as well as company and provider support. Tables 1.4 and 1.5 present information about the learners and their chosen programmes.

Table 1.4 Individual Learners

Potential recruits identified	68
Started on work-based programmes	46[a]
Continuing at various stages	32[b]

(a) 15 of the 22 who did not proceed beyond initial recruitment went on to some other form of training or education. In some cases this had already been thought about and while the work-based option was considered as an alternative, the traditional mode of course was preferred. In some cases suitable work-based programmes could not be delivered by the provider and some went on to other training schemes. A few had personal reasons for example, lack of time, not right time to start.

(b) 14 not currently active:
- 4 - owner-managers - business pressure
- 7 - pressure of work (some have completed units which can be held in credit); change of job
- 2 - pursuing alternative traditional courses
- 1 - extenuating personal circumstances

In some cases the ability to cope with or commitment to study may have been an issue, although the reason given may be lack of time or pressure from work.

The two aspects of the programme which proved to be more popular were the Certificate in SME Management, specifically devised and promoted for SME Managers. The other areas were the specifically vocational Scottish Vocational Education Council (SCOTVEC) awards. The introduction of Scottish Vocational Qualifications is perhaps not remarkable as they are about work-based competence; however, it was through contact with the LISC programme that these were introduced to some companies and some individuals who might not otherwise have been involved.

One potential learner had already been granted credit for the first unit of the Degree in Computing at Stirling University on the strength of previous Higher National Certificate qualification. The possibility of credit for the second unit of the degree was explored on the basis of his work-based experience, but it was decided that he did not have sufficient experiential knowledge and he continued with the degree on a part-time basis. The possibility of gaining degree level credit for work-based learning in the subject area of computing was publicised as part of the programme, but it generated no further interest.

The low level of interest in the Access was highlighted in the Interim report and this will be referred to in greater detail in Section 2 of this report.

Table 1.5 Programmes for which the learners were identified

	Identified	Started	Completed/ ongoing	
Certificate in SME Management	22	18	11	
Credit for degree unit	1			
Access taught in Workplace (LAW project)	3	3	1	
Personal Skills Portfolio Access	6	6	2	
NC/HN Units	25	12	11	*
Scottish Vocational Qualifications	11	7	7	*
Total	68	46	32	

* For example: IT Applications; Accounting; Business Administration; Construction; SVQ Level 3 Management

1.3 Issues raised in Interim Report

❑ *Characteristics of participating companies*

The information collected from companies who had decided not to become involved in the LISC programme suggested that it was because they thought that this particular approach did not suit their needs, rather than that they did not see value in training for staff. The LISC programme was *not* offering short term training which would be accomplished in a half-day or a whole day event. Rather, it was looking for commitment to longer term development for individuals which would ultimately lead to certification.

Was there anything about the participating companies which distinguished them from the others? Early analysis was reported in the Interim Report. These points have been added to and refined as work with the companies progressed:

- The existence of *champions* appears to be important to the successful initiation of a work-based learning scheme. These champions are typically senior individuals who value education and training and are influential within their organisations.

- Training and development is intimately associated with initiatives such as *Investors in People* and/or ISO 9000. Those champions with the vision for development are more likely to involve their company in work-based learning schemes.

- Those participating companies with Human Resource Management policies in place could best judge the effectiveness of the LISC programme to their needs.

- In some of the participating companies, personal development is valued as equal to or even more important than short term needs. There is the perception that fulfilling the personal development needs of individuals may have longer term beneficial effects on individual and hence company performance. Furthermore, education and training are seen as being important in the motivation of employees and as such makes them more adaptable.

- Some participating companies were simply willing to try the work-based approach for their employees as an alternative to traditional approaches, though others were sceptical about its benefits. For some it has proved to be beneficial and they would participate again and recommend it (have recommended it) to others.

- While some company managers were less interested than the employee in qualifications as a result of a programme of learning, qualifications based in the workplace are more likely to gain the support of the employer.While some company managers were less interested than the employee in qualifications as a result of a programme of learning, qualifications based in the workplace are more likely to gain the support of the employer.

- Some companies were attracted to the Certificate in SME Management (CSMEM) because, having identified the need for general management development, they had not previously encountered a custom-designed qualification focused on SMEs.

❑ *Learner Characteristics*

Socio-economic background: The data that was available at the time of writing the Interim Report suggested that work-based programmes had attracted more learners from Social categories C and D compared to traditional courses.

Motivation: The work reported in the Interim Report indicated that most adult learners have cognitive interest as their prime motivating factor. However, unsurprisingly, for those recruited to specifically designated work-based programmes *professional advancement* ranked most highly. Nonetheless, *cognitive interest* came a very close second for them also. For the learner, learning related to improved performance in the workplace still needs to be intrinsically interesting.

A report based on a larger sample of learners is given in Chapter 4 of this report.

❑ *Recruitment and meeting company needs*

At the interim stage we expressed concern over the resource intensiveness and time consuming nature of the process of involving companies and identifying learners and relevant programmes. At the final stage there is nothing to suggest that there is a quick and easy way to do this. The increasing emphasis being put on encouraging SMEs to consider their education and training needs may gradually raise awareness and encourage firms towards the frameworks and initiatives identified above as being influential in participation.

❑ *Learner Support*

We reported that it was not always possible to find a suitable support person to be appointed as mentor, and where there was someone, they were often responsible for a range of functions within the company. During the second phase of the project we felt that the label *mentor* was gathering a culture around it and to some people it had overtones of complexity, difficulty and responsibility not associated with the kind of involvement we were seeking. We therefore decided to call our support people *Learning Advisers*. An outcome of seeking to provide appropriate support for the Learning Advisers was the preparation of a set of guidelines which could be used by them on their own, or in a group situation.

❑ *Delivery of individualised programmes*

At the interim stage we raised the issue of how the need for customisation within SMEs can be reconciled with educational establishments' need for volume for cost effective delivery. The issue of cost and approaches to delivery will be discussed in greater detail in later sections of this report.

This section of the report details the three main areas of development in the LISC project. The sections have been written by Alison Boyd, the Project Manager for Falkirk College, Richard Dockrell, the Project Manager for Educational Policy and Development and Liz Seagraves, the LISC Project Officer, and Christina Hartshorn, the Project Manager for Scottish Enterprise Foundation.

2.1 The Further Education College Curriculum

❑ *Introduction*

Further Education colleges seek to provide flexible vocational provision to assist the development of individuals and companies within their localities. In Scotland, this provision includes competency-based routes to SCOTVEC National Certificate Modules and Higher National Units, tailor-made programmes, day-release, evening study and Scottish Vocational Qualifications (SVQs).

Yet, in today's highly competitive economic environment, with an increasing emphasis on keeping costs down, these routes are no longer flexible enough. Employers and employees require cost-effective development programmes that are time and resource constrained. They also require provision which is immediately applicable to their needs.

In addition the Further Education (FE) sector is subject to a number of competing pressures: a decline in the uptake of traditional day-release courses; the requirement to expand overall student numbers but with the constraint of capping of advanced (HN) numbers; and funding linked to productivity. These and other factors have encouraged colleges to consider more innovative ways of offering their provision.

Falkirk College of Further and Higher Education and Clackmannan College, realising the implications of these trends, were keen to become involved in the LISC Project to determine the feasibility of work-based learning in attracting and encouraging individuals, especially those in SMEs, to become involved in training and development. Falkirk College, in particular, became a key player in developing an innovative and flexible system for awardingm credit for SCOTVEC provision (modules and units) through the portfolio approach.

This system adopts a combination of a number of alternative approaches used in the past - accrediting prior learning and work-based learning, offering assessment on demand, and providing open and flexible learning materials for delivery in the workplace across a range of vocational areas.

❑ *The FE Model of Work-Based Delivery and Assessment*

The approach adopted, within Falkirk College, for assessing and delivering SCOTVEC provision, traditionally carried out in the classroom, comprises the following stages:-

Stage 1: An *analysis* of the organisation's needs is carried out along with the job roles and knowledge, experience and skills of those individuals requiring development.

Stage 2: From this a range of suitable modules and units are *identified* and discussed with the organisation and individual concerned.

Stage 3: An in-depth *matching* exercise then takes place between the individuals knowledge, skills and experience (current and prior) and the performance criteria/range statements of the modules/units concerned.

Stage 4: From this, suitable *workplace evidence* is determined for inclusion within an *assessment portfolio.* The range of evidence can be varied and take a number of forms: reports, projects, minutes of meetings, letters/documents, interviews, statements from colleagues/superiors, observation. In some cases, workplace evidence may not be available to meet the specific criteria within each module or unit. In this instance, formal assessments are attempted if the individuals existing knowledge and skills allows *(Assessment on Demand).*

However, if an individual's existing knowledge and skills does not enable the collection of workplace evidence or formal assessments to be attempted, provision is made for the learner to embark on a programme of either open learning (at home or in the workplace) or flexible learning (via Falkirk College's Flexible Learning Unit) to gain the new knowledge and skills necessary. Once complete, the appropriate formal assessment can then be attempted or suitable evidence gathered.

Stage 5: Once assessment methods are determined, a *Learning Agreement* is drawn up between the organisation, the learner and the college detailing which aspects of the modules and units will be covered by evidence gathering, open/flexible learning and assessment on demand.

Stage 6: The learner is then introduced to his/her college *mentor/adviser* who, in consultation with the learner, produces and monitors *action plans* and helps with *portfolio building.* The portfolio contains all the workplace evidence related to each module and unit as well as copies of completed formal assessments.

Stage 7: The portfolio, once complete, is passed to the appropriate college cognate group for *assessment, internal verification* and subsequent *external verification* by SCOTVEC.

Stage 8: Once externally verified, the learner is *credited* by SCOTVEC with the relevant, module or unit. Learners then have the option of supplementing these modules and units to achieve full SCOTVEC awards or using their workplace evidence for credit towards SVQs.

❑ *Some 'Live' Cases*

The above approach evolved as a result of Falkirk College working with a number of learners and companies during the Project. Particular examples include:-

Facilities Support Services, Doune: a family run business offering administration and support to other small companies. Here Val Mitchell, the owner's wife, needed credit for her book-keeping skills and development in computerised accounts. She also wished to, eventually, work towards an HNC in Accounting. Val decided to work towards a Financial Record Keeping Module - gathering evidence of book-keeping work done within the business towards some of the outcomes and developing her skills and attempting a formal assessment for an outcome in computerised accounts. She now hopes to work towards an HN Unit in Financial Accounting Statements, which she can *top-up* to an HNC at a later date.

Maclean and Nuttall, Grangemouth: a franchised SME specialising in heating installation. Pat Muir, the company's administration manager, was keen to offer her staff some training and development, but could not afford to allow them time to attend day-release classes. As a result, 6 of her team decided to work towards a range of IT modules, gathering evidence for some outcomes and attempting formal assessments for others.

Hi-Fas Engineering Supplies, Stirling: a successful business, having won several awards for entrepreneurship. Mary-Jo Carroll, their Accounts manager, has worked with Hi-Fas since leaving school. She wished to gain credit for all the knowledge and experience achieved during her time with the company, eventually leading to an HNC in Accounting. After careful consideration, Mary-Jo opted for evening class study towards 2 HN units - IT Applications and Domestic Economic Environment. However, she decided to work towards another unit - Financial Accounting Statements - by studying in the workplace and gathering evidence and attempting formal assessments in the process. She now only requires another 3 units to complete her HNC.

In addition to the above, both Colleges have been involved in the delivery of SVQs in the workplace, under the auspices of the Project. Particular examples include:

A McCowan & Son, Larbert: a long-standing company famous for its toffee! Anne Cumming, Personnel Manager became involved as she wanted to develop staff, but could not afford the time to send them on day-release. The chance for Donna Anderson, who works in accounts, to gather evidence for an SVQ Level II in Accounting, via Falkirk College, during the course of her work was therefore a welcome opportunity. Donna, having gained increased knowledge and confidence as a result, now intends to continue to SVQ Level III.

Taylor Group, Larbert: a foundry, has provided work for many years to those in the surrounding area and is renowned for its commitment to staff development. Chairman, Mike Willis, wished to develop and gain qualifications for 4 of his key supervisors. Malcolm Heron, Joe Todd, Ian Walker and Gordon Paterson were also keen to gain credit for the knowledge and skills gained over many years of supervising staff, as well as developing their roles further. They therefore embarked on the process of gathering evidence towards SVQ Level III in Supervisory Management via Falkirk College. However, it was found that their daily workload made it impossible for them to find time to compile portfolios, and one supervisor, who became disillusioned with the process of gathering evidence, dropped out. The others requested a break in the programme. As a solution to this problem an alternative to the SVQ was offered - the NEBSM Supervisory Certificate on an open-learning basis, and this was accepted.

John Gow & Son, Alloa: a building contractor who has operated in Central Scotland for a number of years. Mr David Gow, the owner of the company is actively involved in training within the building sector and is committed to developing a trained workforce, holding relevant qualifications. To this end, he identified two of his older building labourers as suitable to undertake SVQ level 2 in General Building Operations. It is more normal for school leavers to undertake these qualfications and therefore these employees are being given the opportunity they would not normally have had to gain qualfications. Clackmannan College is working closely with the company on the process of gathering evidence towards this SVQ.

There was potential for working with other companies: indeed in some cases .nterest was expressed by companies, and potential candidates and programmes were identified. However, there are difficulties in encouraging some members of college staff to embrace the concept of work-based learning and thus an in ability to deliver all the programmes as identified by potential participants.

❑ *Benefits of programme*

Participation in the LISC Project has been a worthwhile and enlightening experience for both Colleges, with the following benefits being realised by Falkirk College in particular:-

For Learners

Increased access for those within SMEs to learning previously hindered by traditional delivery of provision.

Opportunity to gain credit for knowledge and skills already acquired and develop new knowledge and skills without leaving the workplace.

Ability to gain credit, not just for VQs, but nationally recognised SCOTVEC modules and units.

Possibility of supplementing units/modules gained in the workplace to achieve full awards, for example an HNC. Evidence gathered towards units/modules can also be used towards SVQs.

For the College

Collaboration with neighbouring educational institutions.

Developing closer links with, and a better understanding of, the needs of local employers.

Creation of an innovative and highly flexible system of delivery which can be extended to larger organisations.

Introduction of such delivery to full awards. For example, the HNC and NC in Training and Development is being offered, following this more flexible pattern of provision, in session 1995/96 and it has attracted trainers and training managers from a variety of companies and sectors, who previously would have been unable to attend the traditional mode of delivery of the course.

Provision of access to a wide range of customers previously hindered by traditional delivery.

❑ *Factors Encouraging and Inhibiting Success*

Although benefits have been realised as a result of participation in the Project, Falkirk College feels it has had less than satisfactory experiences with some aspects of the work-based learning and assessment. These have tended to focus on:

- the ease with which individuals and companies have delayed in meeting agreed dates for submission of work, either due to lack of commitment from the individual and within the organisation itself or sheer pressure of day-to-day work, common in most SMEs, forcing individuals to curtail or suspend their development.

- the lack of commitment to, and understanding of, the concept of work-based learning at different levels within the College.

For Clackmannan College the concept was particularly difficult to implement. This was seen in part to do with the pressure within colleges to commit lecturers' time to viable numbers of students, even though the development work was subsidised. Ultimately, willingness to commit to the concept of work-based learning was found only in the area of Construction.

Factors which would encourage success are:

- The allocation of time within SMEs to allow individuals to develop, with strong support from both management and the educational institutions involved. Support for learners needs to be proactive; it is not sufficient to say "we want people to learn and develop". Positive support is required.

- Some time away from the workplace at college would help, for example fortnightly or monthly progress/support meetings held in the evening or at weekends. This would also allow employees to interact with people from other companies and provide the encouragement and confidence which may be lacking through lack of identification with others undergoing the same learning experience.

❑ *Costs*

A major issue is the creation of an affordable pricing structure to encourage the uptake of the provision. The Scottish Office Education and Industry Department (SOEID) Grant-In-Aid is available towards those modules and units undertaken on a work-based learning basis and it is recommended that participants are charged at an affordable hourly rate fixed by the College Board of Management. Perceived affordability to potential students may depend upon the duration of a programme and the type of learning and assessment undertaken.

Assessment on Demand would take considerably less time than portfolio assessment, for example, and may be the basis of a more economically viable model.

❑ *Embedding Issues*

A number of issues have to be addressed to ensure the successful embedding of the concept of work-based learning into the institution. These include:

- The creation of a college-wide policy on the use of work-based learning and assessment within the curriculum and procedures for the effective recruitment to, and administration of, such an approach.

- The creation of a centralised cross-college function, in the initial stages, to promote effective marketing and administration of the approach and an increased awareness of the concept to all academic staff. Using such a strategy, *champions* within Faculties can be identified to take the initiative forward.

- The need for an increase in the range of open and flexible learning materials available to support learning in the workplace.

- The creation of a range of tools for assessment to complement evidence supplied through portfolio building, for example for *Assesment on Demand*.

2.2 The Portfolio-Based Access course

❑ *Introduction*

Amongst the roles of Educational Policy and Development in the University of Stirling is the commitment to introduce new approaches to the delivery of continuing education. In particular it is responsible for making it easier for people from all walks of life to gain access to higher education.

It does this firstly by running Access courses for people who do not have standard entry qualifications, and secondly through the part-time evening degree programme to suit people who, for various reasons, cannot undertake full-time study. Part-time undergraduate provision is supplemented by a Summer Academic Programme.

The provision of work-based learning programmes is another manifestation of flexibility. The Developing Employment-based Access to Learning (DEAL) project piloted work-based learning in large companies (Reeve et al 1995), while the LISC programme sought to open up the same opportunities to those employed in smaller companies. A third programme Learning at Work (LAW), which delivers a taught Access programme in the workplace, is offered. This is supported by funding from the Scottish Higher Education Funding Council, under its Flexibility in Teaching and Learning Scheme (FITLS). The LISC approach to work-based Access was through portfolio development and was an extension of the DEAL model. Where the portfolio-approach was not considered suitable for learners identified in LISC's SME target group, in dividuals were given the opportunity to join the LAW course being provided within other larger organisations.

❑ *The Portfolio-based Access Course*

The Portfolio-Access Programme is constructed on the premise that the principal purpose of an Access course is the development of certain generic skills that will aid survival in higher education. These skills can be developed in a variety of situations and therefore opportunities for accreditation exist. For this purpose the programme is divided into two major stages: firstly, the production of a portfolio which gives evidence of prior learning and, secondly, preparation to undertake academic studies.

The Portfolio

Individuals examine their work experiences using a skills checklist to identify if they have developed or applied the skills in a work or social context. The skills which have been considered as relevant both to the workplace and to academic study are:

self and time management skills
working with other people
communication skills - oral, written and graphical
problem-solving
collecting and using information
mathematical and numerical skills
self-evaluation

They then gather evidence of how these skills have been used and draw it together into a portfolio, which requires writing personal narratives to explain how the evidence shows that they have the required skills. Reflection upon the skills, their use and how the evidence supports the claim for the possesion of the skill is key to success of candidates in this part of the programme. The portfolio is assessed and counts towards the award of the Access Certificate.

Sometimes it may be necessary to provide evidence of specific subject knowledge depending on the subject the individual wishes to study at University. If an individual does not have such prior knowledge, for example in the area of mathematics, this can be provided through open learning material.

Preparation for Study

This stage involves a series of seminars which help individuals apply their work-based skills in an academic context. Individuals carry out assignments which are assessed by academic staff, and count towards the award of the Access Certificate. The seminars incorporate study skills and introduce topics which are progressively unfamiliar to the learners, thus enabling them to transfer skills from familiar to unfamiliar contexts. The topics chosen for the group of learners who took part in the LISC programme were: the Management of Change, Approaches to Management, Issues of Equality, Equality and Education, and Environmental Issues.

❑ *The delivery of the Portfolio-based Access course SMEs*

Recruitment

The Interim report highlighted the fact that employers had not been attracted to the Access provision for their employees. The thinking which underlies work-based learning assumes that involvement of staff in education and training should contribute to the overall competitiveness of the company and therefore it was primarily the employer who was targeted in the initial recruitment activities of LISC. Learners would only be recruited on to programmes provided employers were convinced that the programme itself would benefit the company in some direct or indirect manner. Those strands of the programme perceived as satisfying some immediate organisational objective (eg CSMEM and HNC/VQ) were popular among employers and led to the enrolment of significant numbers of students.

However, the work-based Access programme did not seem to satisfy the requirements of many SMEs in terms of the immediate application of the learning. The purpose of the Access course is to prepare individuals for higher education study; it is rarely if ever considered an end in itself. Furthermore, the degree programme, taken on a part-time basis is unlikely to be shorter than five years and therefore any benefit secured by this programme would be long term. The argument that SMEs tend to operate on short term time horizons has been well exercised and largely accepted; this tendency applies to staff development as it does to any other area of SME operations.

It was reported in the Interim Report that a survey of those participating in Access and part-time degree provision at that time had revealed that 10 out of 49 (20%) of respondents on the University of Stirling part-time Access Course were employed in the private SME sector, although none received help with their fees. Of the part-time degree students who responded 74 out of 381 (23%) were from the private SME sector, with 16 of those receiving help from employers with their fees. The fact that only 16 were receiving help with fees suggested that individual motivation rather than company encouragement was behind participation.

For this reason the project team believed that recruitment would be more successful if the promotion of the work-based Access programme was targeted at individuals who, for the purposes of this project, happened to be employed within SMEs. Once the potential learner was identified the project team could utilise the employee as a champion within the organisation, that is, seek the co-operation of their employer.

The portfolio based access course was advertised in local newspapers, aimed at individuals who worked in SMEs and this produced a large number of enquiries. Eight pursued the offer as far as coming to an introductory seminar and 6 enrolled on the programme. Those who requested information but who did not take the enquiry further were followed up. The main reason for not pursuing was the certainty, either confirmed or sensed, that their employers would not support them in their endeavours.

Candidate progress

The 6 participants came from a range of industrial sectors; tourism, residential care, manufacturing, transport services. In these cases employers were convinced of the merits of the programme chiefly, although not exclusively, through the actions of the learners as champions.

During the induction stage of the programme the issues of personal motivation, organisational support and the candidates' capacity to develop the portfolio from the skills inventory were recognised as important; however, they were not considered entry requirements. Individuals were not excluded from the programme if one or another of the above points were not fully satisfied. For the purposes of the pilot exercise, flexibility in terms of recruitment was considered acceptable as additional support could be made available as required.

While all 6 candidates completed the initial skills inventory exercise, designed to establish the individual's capacity to complete the work-based portfolio, not all submitted a portfolio for assessment. This section of the programme, because of the need for self-direction, seemed to present candidates with significant difficulties and prompted several withdrawals. This part of the programme requires candidates to display a capacity for self-discipline and self-management, and candidates are required to work independently of each other and the University for a significant period of time. They must negotiate with their employer and their family for time and support.

Work and personal demands proved too great for 4 members of the group. Personal circumstances can and will always overwhelm some individuals and cannot be legislated against, and, unfortunately this proved to be the case for 2 of our candidates. One had difficult family circumstances and the other found himself changing jobs part way through the programme.

However, there are lessons to be learned in terms of work pressure, personal motivation and appropriateness of the provision for individual needs as exemplified by the cases described below.

One of the candidates to withdraw operated in hotel and catering, an industry that has traditionally found it difficult to develop its employees. Work in this sector is usually seasonal, temporary, intensive when available and prone to high levels of worker mobility.

The accelerated programme requires candidates to display a significant capacity to reflect on work-based experiences. The fourth candidate who withdrew demonstrated a significant amount of personal motivation, but the degree of reflection required presented significant difficulties to her, resulting in her non-completion of the programme. This experience did not discourage her from pursuing further personal development and she sought out alternative, more suitable provision.

The 2 successful candidates, Alec Curran from United Closures and Plastics and Julie Rice from Caledonian Freight demonstrated that they had the motivation to complete and had already identified long term plans for further development. They had the ability to reflect on the skills process, the self-discipline to complete the portfolios and succeeded on first submission.

Three individuals who worked in small companies joined the LAW programme. One of these did not have the opportunity to demonstrate the skills required for the portfolio and 2 did not have the support of their companies to undertake a work-based programme. Indeed one did not even want his employer to know of his involvement. These candidates were coming into a group established within other organisations, which is difficult in itself. Two of these did not complete and the following reasons were given: for one it was family and other study commitments, plus difficulty of attending at a fixed time, which was, of course, set to suit workers in another company; for the other it would appear that the employee was often asked to work overtime when she should have been at class.

❑ *Factors encouraging and inhibiting success*

Corporate and individual perceptions of value of long term commitment to learning

One of the factors which limited the uptake of the Access Course was the apparent lack of vision that there was any real gain to the employer by encouraging employees to prepare for long term study, and it is true that an individual embarking on an Access Course is unlikely to be able to demonstrate a direct or indirect benefit from the learning for some considerable time. The individual employee, on the other hand, may perceive a programme of learning concluding ultimately in the acquisition of a degree as of direct benefit. Those employers who regard personal development in terms of enhancing general motivation and improvement of the person as an individual and hence as an employee are more likely to create an environment in the workplace which encourages success for an employee who wishes to prepare for, and proceed to higher education.

Learner/course compatability/guidance

Work-based learning, particularly when it involves evidence gathering and analysis and reflection of the process of workplace activities requires the learner to impose his/her own discipline on the learning. Some candidates may find this difficult and appropriate guidance to learners in terms of capacity and the level of learning is vital. It is important to be able to offer alternatives to those unable to continue with an intensive portfolio based approach.

Seasonal workers, such as those in the hotel and catering industry, find few courses which suit their work patterns. A programme flexible in terms of time and pace of delivery might be able to exploit the quieter periods providing a shorter but more intensive programme.

Learner networking and self help groups

Such networks are important to avoid discouragement particularly to employees in SMEs who may be the only learner on a particular programme within their organisation. Such networks may also help impose the discipline required in work-based learning.

Company collaboration

Workers within SMEs may be able to take advantage of suitable education and training opportunities in nearby larger organisations, particularly if they are part of that company's supplier chain. However, the infilling approach has its disadvantages especially where the course has been designed to suit the needs of the larger organisation.

❑ *Costs*

Costs for the Portfolio-based Access Course were calculated on variable costs per individual student for portfolio support and assessment, recognising that some students require more support than others. The remainder was costed at a fixed rate including tutor costs, administrative and secretarial support, and some overheads. On this basis, it was calculated that with a group of 10 individuals minimum a fee of £350 would cover direct costs, though true full costs, including university overheads, would be higher. Access programmes are unlikely to be funded on an FTE basis in future by SHEFC; it thus may be that work-based provision of this type can only be provided by universities at a significantly higher cost, or may be the preserve of FE colleges using SOEID Grant-in-Aid.

❑ *Embedding issues*

Clearly, there is a major problem of investment of staff time for so few candidates. The activities undertaken with this particular course in its existing format - portfolio preparation and assessment, tutorials outwith working hours and in suitable locations, external examination arrangements - are not viable.

However, in spite of the lack of interest from employers in encouraging employees to take part in an Access course, the skills analysis approach was recognised as being a useful tool in personal evaluation and development and could be used within an appraisal system. We feel it is therefore important and relevant to explore such a use of the skills portfolio.

It is also recognised that the portfolio approach suits some individuals more than others, and it would be better to offer this opportunity to people within a framework of options. It may be more attractive to both employers and individuals if the starting point of this form of provision is credit-bearing programmes at SCOTCAT level 1, with the Access course as a fall-back position for those who cannot be given open access to degree level work. For the institution the next initiative to be explored may be the flexible delivery of degree level units in the workplace using models developed in this part of LISC.

2.3 The Certificate in SME Management

❑ *Introduction*

The Certificate in Small and Medium Enterprise Management (The Certificate), has its genesis in the Management Extension Programmes (MEP) of the 1980s. These programmes comprised two elements, a short initial theoretical input followed by a longer practical in-company placement. Their aim was to provide unemployed managers in particular with the mechanism through which to re-equip themselves with new management skills and knowledge to regain employment for themselves. These MEP courses were uncertificated, and directed specifically at recently unemployed managers who were, in the main, male.

The Scottish Enterprise Foundation (SEF) took the MEP concept and considered how it might meet the needs of another target group - women returning to the economy. This group needed a certificated programme to convince employers of their level of study. They also required a period of time in a real work situation, to compensate for their lack of recent work experience, and to provide a facility to apply their recently acquired enterprise management skills. The programme was not a preparation for a general management career, but specifically for a career in small business management. Thus The Certificate was designed, delivered and awarded for the first time in 1991.

As these full-time students undertook their management projects during the period of in-company placement, many of the host owner-managers enquired as to whether their own employees could be enrolled on The Certificate programme, but as part-time students through a day release or evening class mode of study. It was apparent to this group of small business owners that both the content and format of the Certificate were directly relevant to the management needs of the smaller company. The opportunity to respond to these needs came through the LISC project. The course team at SEF were able to develop The Certificate into a work-based format, whilst keeping the same content and methods of assessment. It is not a competence based model; it does not accredit prior learning, nor does it require the student to gather and present a portfolio of evidence on which to be assessed. The course is, however, constructed so that reflective learning can take place (Kolb 1984).

The work-based learning approach used in the Certificate perceives of the workplace as a vehicle for learning, where the knowledge acquired through the planned course of study can be applied (Crow 1994).

❑ *The Work-Based Experience*

A total of 18 employees from 10 companies have embarked on the Certificate in Small and Medium Enterprise Management. These employees formed 2 cohorts of learners, beginning their studies in December 1994 and December 1995 respectively. At the time of writing, none of the students have completed their course, but 4 from the first cohort will complete within the next 2 months.

The 2 cohorts were very diverse in composition. Cohort 1 was characterised by the variety of sectors of the employing companies. Only one company had more than one student (2 from the Taylor Group), whereas in cohort 2, 6 of the 7 students are employed by one company, Avery Dennison. This has presented the Certificate course director, who is also the SEF Project Director for LISC with significant and contrasting issues to resolve during the pilot phase.

The students participating on the Certificate programme are all currently employed in positions of responsibility within smaller companies but may or may not have the title *manager*. The majority of the students have no recent (within the last 8 years) experience of study, and their educational experience has in the main been of a formal nature, either full-time or day release.

The Programme

The mode of delivery of The Certificate is to provide learning materials covering 6 topic areas (Units of Study) in aspects of smaller enterprise management. These comprise Marketing, Human Resource Management, Finance, Business Strategy and Quality Production. The sixth Unit looks at how smaller firms differ in operations and context from larger companies. The method of assessment is by 6 assignments, an examination (in open book, at a distance format) and a management project. All of the assessed work is based on the learners' own work situation within the employing company.

The course commences with an induction workshop to introduce learning and study skills. This is followed by monthly workshops throughout the year-long course. The purpose of the first 6 workshops is to introduce a specific management topic and present the Unit learning materials. The Unit assignment is also given to the students at the workshop. Each workshop during the pilot phase has been led by the author of the Unit learning materials. The remaining 5 workshops are run as Action Learning sets, and have been facilitated by the course director to keep continuity. This form of learning support is particularly valuable during the management project phase. Action learning is widely used in management education and development and is recognised as a process where the learner has *control* over their own learning. Each person learns with and from the others in the group, who are also grappling with the same task of managing a real problem over real time. Learning from real situations, both one's own and others' fits well with the philosophy of work-based learning on which the Certificate is formulated.

Managing the Learning Experience - Companies and Learners

Where the group of learners are from different companies within a variety of sectors, a very high degree of knowledge and experience is exchanged, both in the formal workshops and informal, self-managed learner support groups. There may however be a strong sense of isolation as the only *learner* in the company. Where the learners are in the main from the same company, isolation is low, in-company peer support is high, but the opportunity for exchange learning is low.

One of the participating companies, Avery Dennison, recognised this potential threat to its employees' (and thus its own) learning opportunities and proposed its own solution. Avery Dennison has attained the status of World Class Manufacturer, is recognised as such by its peers and is a leader in a WCM network that is supported by Scottish Enterprise. It plans to ask other companies in this network to act as an *assignment base* for its employees should they, the employees or the Certificate director feel that learning opportunities are otherwise limited.

Where the company has only a single or few learners, opportunities to diffuse the employee's new knowledge needs to be approached in a similarly innovative fashion. In The Taylor Group, learner Margaret Duncan has tackled many of her assignments by approaching her colleagues for information or for their opinions. As she has aroused the curiosity of her peers and senior management by involving them, so they have requested that she share her findings with them. As a *quid pro quo* she has circulated her completed assignments around the company. Chairman Mike Willis has noted that Margaret's assignment technique has also provided a learning opportunity for him.

The management project is a mechanism whereby the learner demonstrates their ability to draw together the knowledge gained earlier in the course from the discrete management areas presented as Units of study, and to apply this knowledge in an ongoing *live* situation within their own organisation. The project brief is agreed by the learner, the owner or senior manager in the company and the course director, before the project begins.

Learner Abi Snowden, a junior manager at The Lake Hotel, decided in collaboration with the hotel owners to undertake a feasibility study to maximise hotel facilities during the low season.

❑ *Factors Encouraging and Inhibiting Success*

The time available to the learner for study

Whilst this may be stating the obvious, in that this is the case for any work-based or part-time learner, the nature of the small firm sector has a particular bearing on the *time* factor. Smaller companies are characterised by their ability to respond quickly and flexibly to the needs of the market in general and individual customers in particular. Such flexibility is attained in part by the willingness and ability of the workforce to operate flexibly. In practise, this conflicts with advice from tutors to plan for systematic study, when the exigencies of working in a market-responsive company requires the learner to change work patterns often at very short notice. If this is the case for employees in smaller companies how much truer this is for owner managers themselves. Of the first cohort of students, the four who were the first to withdraw were all owner/managers. All gave the same reason for giving up the course - the needs of their company came first second and last, and they had not realised what this meant in practice until faced with the reality of systematic study and the production of assignments

Competing pressures from family and domestic commitments

Many key employees in smaller companies are at the age and stage in their personal lives where they are parents of very young children. Where they are then also called upon to work flexibly, *de facto* the time available to study reduces to an amount insufficient to continue on the programme.

Student support

This is another factor critical to the success of the learning process. This has been accomplished by means of regular workshops/action learning sets organised by the course tutor, support from the in-company mentor, telephone support by tutors at the instigation of the learner, and informal self-help meetings arranged by the learners themselves.

❑ *Cost*

The Certificate was developed into a work-based learning format by the lecturers who had been teaching on the full-time course for the previous four years, under the editorial guidance of the Programme Director. A conservative estimate for development of materials associated with the Certificate is £19,000. Delivery costs are at usual staff rates.

During the pilot phase the course fees have been set at £1,000 in line with other certificate level courses offered within SEF. This is much less expensive than other comparable certificates either in general management or specifically for small business which cost in the region of £1,800 to £2000. It is in line with the figures that employees of smaller companies, who earn on average lower salaries than those employed in *big* businesses say they are prepared to pay. However, in order to reach break-even, based on cohort numbers of about 12, this initial course fee level will need to be raised to approximately £1,500.

One participating company whose LEC was contributing fifty percent of the fees, agreed to pay for half of the remaining fees, their employees the remainder. This equates to the employees paying a sum of £250 towards the Certificate.

If the strategy model of Johnson and Scholes (1984) is applied, then no matter how *suitable* or *acceptable* the Certificate is perceived to be by employees, if the true market cost is not subsidised to some degree, then it is not *feasible* to undertake this course of study.

❑ *Embedding Work-based Learning in the Institution*

The SME-sector is recognised as a poor user of formal learning and training opportunities. It responds well to overtures from those educational organisations it knows from previous experience or by recommendation from other smaller companies. Work-based learners need local support, from other learners and from institutions. The University of Stirling is not located in a high density SME region. It cannot draw upon large numbers of small local companies as potential purchasers of The Certificate. One strategy therefore to ensure that The Certificate is embedded in the institution, is to develop a network of licensed local providers, in the form of further education colleges who have demonstrable links with the surrounding SME sector.

At Stirling, the School of Management has a model of Higher degree study for professional development (Health Care, Retail, Public Sector) based on the articulation of certificate, diploma and masters levels of study. Although not labelled as work-based, *de facto*, many of the assignments can only be completed by close reference to the learner's employing organisation. The Certificate makes overt that which is tacit in other School postgraduate schemes of study.

The Certificate existed only as a full-time programme in the University calendar before the LISC initiative. As part of the embedding process, a new award with its own set of calendar regulations has been created. The award had to be endorsed by the Board of The School of Management, before final ratification by Academic Council.

3 EVALUATION - THE COMPANY AND LEARNER PERSPECTIVES

3.1 Introduction

There is a thread of evaluation that is running throughout this report and its predecessor the Interim Report. In this section we examine how the companies and learners have viewed the Programme against the background of their respective aspirations when they became involved. We are aware that for most participants and their organizations the evaluation of the benefits of the programme has not yet taken place, as activities are still being undertaken. However, it is still remains useful to obtain their views at this time.

3.2 Methodology

The method chosen for the collection of data was that of the postal questionnaire, one designed for the business and the other for the learners. These were backed-up with telephone discussions where appropriate to seek further clarification.

We only attempted to survey phase one and phase two recruits as it was too early for the later companies and learners to be evaluated. We considered it important to understand why individuals/organizations dropped-out of the scheme and, therefore, all those who entered initially have been contacted regardless of their current status.

We sent out 35 learner and 16 company questionnaires. Follow-up letters were sent to non-respondents after three weeks.

3.3 Results

❑ *Response Rate*

A sixty percent response rate was achieved for both sets with a representative selection of continuing and drop-out respondents.

❑ *Companies*

There appears to be no difference in profile between the companies that have dropped-out and those that have not; indeed some companies both have drop-outs and continuing participants.

We have reported elsewhere in this document and in the LISC Interim Report (Osborne et al 1995) on the profiles of participating and non-participating organisations. However, we have in this evaluation re-visited participating organisations to determine what their objectives were in undertaking the Programme. The key objectives were to:

- improve business performance
- meet identified training needs
- improve employee performance
- to provide qualifications based on the work-place.

However the most popular objective was for employees' personal development.

Little evaluation of the scheme by the companies has taken place to date, but clearly where participants had dropped-out the objectives had not been met (although in a few cases other methods of provision were being undertaken). Some companies, however, did report that they believed their objectives are being achieved with employees' confidence and skills improved and changes being made which are of benefit to their organisation. Here are some typical quotes:

- *' . . . beneficial to the company as a whole . . . helped us look in more depth at certain areas of the company which could be improved upon'.*

- *'Fresh approach . . . Relevant to our business needs'.*

- *'It has increased self-confidence of employee'.*

- *'Increase in employee's self-confidence and skills'.*

For those companies where the programme concluded before completion the main reasons given were 'lack of time' to undertake the activities required and some 'failure to meet company needs'. Mentioned also was the length of time taken to set up procedures for work-based assessment and APL and the development of portfolios. At least one company gave up when these were still not in place a year after signing on for the project.

It should be noted here that although companies were generally satisfied with the administration from the University and Colleges, a minority of the continuing companies believed these procedures should be made more efficient and effective. Some suggestions for improvement are:

- *'More tutor/candidate time would have been beneficial'.*

- *'Get employer more deeply involved . . .'.*

- *'Convince candidate of validity of programme'.*

Worthy of mention is that nearly all the companies that have been involved in the programme regardless of their current status would recommend it to other employers and also encourage other employees to participate. However, few companies were prepared to pay for the programme unless it was subsidised and the maximum that anyone was prepared to pay was £500 (for CSMEM).

❑ *Learners*

The previous qualifications reported by the respondents to this evaluation survey paralleled those already reported from initial data in the Interim Report and also shown in Chapter 4 of this report. This confirms the opening up of higher education to a non-traditional group.

There does not appear to be any relationship that links previous levels of education or its timing with participants continuation or drop-out from the project.

The main reasons given for becoming involved were:

- to do the job better
- for career development
- to obtain a qualification

However the major factor was that they 'were already thinking about studying and LISC seemed a good opportunity'. It should be noted though that this factor differed between on-going participation and drop-out, with drop-outs not featuring it to the same extent.

There was an expectation to learn new things to help with the present job and to a lesser extent to prepare for the future. Most participants expected to make use of what they had already learned as part of their job, although this did not feature quite so strongly with individuals who dropped-out.

It is clear that ongoing participants expected to have to spend time thinking more about work than those who dropped-out. Conversely peer, employer and institutional pressures appear to influence non-completers more than completers.

As would be expected the views of those continuing differ considerably from those that dropped-out when one looks at their enthusiasm for the method of study and accreditation and whether or not their expectations and objectives had been met. Learners continuing with the programme are satisfied overall that it has or is meeting their needs. They preferred work-based learning to other methods although they found it more time consuming than expected. There follow some typical responses:

- *'In general I enjoyed the course and look forward to continuing in part-time learning'.* (Access student)

- *'. . . also obtained a unit by my work experience'.* (Higher National student)

- *'The main advantages of the course were you could build your work around it and it was easy to follow. Most of the course was based on work I was already doing so it did not require a lot of study'.* (SVQ student)

- *'I work a rather strange shift system yet this course was flexible for me to be able to attend meetings'.* (Access student)

- *'An advantage of the course was the challenge to link theory with practice.'* (CSMEM student)

In contrast, the non-continuing group had generally found it more difficult to identify provision of suitable learning opportunities in the work-place to meet course requirements. But by far the greatest factor affecting drop-out was 'lack of time due to work commitments' (personal and other education commitments featured for a minority). This quote sums up the view: *'I was not able to make time available - sadly this was not available. Disappointed with myself for not continuing.'*

A small number felt that the programmes they were undertaking or going to take did not fit their needs, paralleling the employers' views. One participant went as far as to say: *'Led to believe my needs could be met . . . misled into thinking I could be helped'.* An analysis of the learners who dropped-out failed to show a relationship between the individual type of programme undertaken and the likelihood of non-completion.

3.4 Conclusions and Recommendations

The main issues arising from the work on the LISC project, including the points which emerge from the formal evaluation activity, are presented in Chapter 5 of this report.

❑ *Introduction*

One of the aims of the LISC project is to open up opportunities to people in the workplace who might not otherwise have thought of becoming involved in programmes of learning, or who had thought about it but had been unable because of circumstances to become involved. Participation in education and training is seen to vary according to factors related to an individual's life-cycle and place in society, namely that individuals are more likely to participate if certain factors prevail. Part of the evaluation work was therefore to consider the personal, educational and socio-economic backgrounds of the participants. Learners were asked to complete a questionnaire exploring these issues at the beginning of their involvement in the programme. Some early findings were presented in the Interim Report.

Individuals on a range of courses have been surveyed, but here we concentrate on the LISC participants. Thirty one of the LISC learners completed questionnaires - 14 FE learners, 13 CSMEM learners and 4 Access learners.

❑ *Socio-economic background*

Father's occupation: The questionnaire asked people to indicate, where applicable, the job of their father or responsible male person in their lives during the latter years of their schooling. This was taken as an indication of social class. The categorisation used is that of the Social Grade Guide: Occupation Groupings (The Market Research Society 1991). In broad terms the division between non-manual and manual is between the Ci and Cii groupings.

Four people did not respond. The remaining 27 gave the following information:

Father/male figure in non-manual occupation	7	=	26%
Father/male figure in manual occupation	20	=	74%

These data appear to support our aim of attracting groups that are normally under-represented in Higher Education. Not all FE College learners were involved in HE provision and we do not know how many of them will progress to HE in due course. However, for comparison, it is noteworthy that the figures for 1992 show that 66.7% of those offered places in the 'old' universities and 55.2% in the 'new' universities were from social class backgrounds I and II (which are akin to A and B in the Market Research categorisation) (AUT 1995).

Learner's Occupation: The majority of our learners (77%) were in non-manual occupations. It is interesting to note the progression from their own family backgrounds; however, it is not a surprising finding as the integration of academic and work-based learning requires the individual to be operating at a level of analysis and presentation skills not usually associated with manual work.

❑ *Current Job status*

Almost half of the learners (15 or 48%) had been in their current job for 5 or more years, with another fifth (6 or 19%) having been in more than one job, but in the same occupational area. The remainder had been in a combination of situations such as unconnected jobs, mixed employment and domestic responsibilities, mixed education and employment, and mixed employment/self-employment. It might be expected that individuals in a stable job situation are more likely to become involved in learning programmes and as such our findings are not unusual.

❑ *Educational background*

Fifty percent of the learners had left school at the minimum school leaving age. Five of the 31 (16%) had no Ordinary or Standard grades or Higher grades[1]. Twenty-one (68%) had some O grades and only 5 (16%) had both O and some H Grades. Two of this last group had 4 and 5 H grades on leaving school; one of those was enrolled on the Certificate in SME Management Course and the other was involved in FE provision. Thus only 2 of our learners would have qualified for entry to HE on leaving school.

However, only 5 had not gained any qualifications since leaving school. Five had undertaken some O and H grades since leaving school, 16 had gained some form of *vocational* qualification such as National Certificate modules, Higher National Certificate/Diplomas, City and Guild Certificates, one person was a graduate and the others had various unspecified qualifications. Seventeen individuals (55%) indicated that these qualifications had been gained with some support, for example, time off or payment of fees, by either their previous or their present employer. This indicates that the experience of the majority of our group has been favourable in terms of employer support for learning. On the other hand, the group also includes some who were gaining support for the first time.

❑ *Recent Participation in Education and Training*

Although there had been considerable involvement among our learners in gaining qualifications since leaving school, 23 (74%) had not been involved in the previous 5 years, and 19 (61%) had not thought about being involved. There is a suggestion here that the opportunity to become involved in the LISC project with its work-based approach tapped into a reservoir of potential that might otherwise have remained untouched. However, the findings of the post-programme evaluation suggest that some of the learners had been thinking about some form of study and the LISC programme 'came along at the right time'. This is not necessarily a contradiction as the original questionnaire asked them to identify specific courses which they had considered but with which they had not proceeded. The post-programme evaluation identifies a more general consideration of looking for study opportunities.

❑ *Motivational characteristics*

Conventional wisdom suggests that if we understand the motivations of those who participate in education and training, this will help policy makers and programme developers to design learning programmes that meet the needs of the targeted group of learners. Thus, we looked at issues pertaining to motivation to identify if learners recruited to work-based programmes differed from the motivations of other adult learners. This was done following the work of Boshier and Collins (1983, 1985) using Boshier's Education Participation Scale.

Boshier developed his scale over many years and samples of adult learners and his instrument is accepted as valid, tried and tested for measuring motivation. The instrument consists of 40 statements for responses on a 4-point scale from *very much influence* to *very little influence*. These statements are analysed in terms of 6 factors. These are given below, with the means scores which Boshier's large scale study yielded, and the means scores of the LISC learners. It should be noted that Boshier's study included many thousands of cases and as such the results are statistically more significant than for our small sample.

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[1] The Scottish O grades and S grades equate to the English O level and GCSE levels. The H grade is usually completed one year after O/S grades and is therefore broadly equivalent to the English A level. It is traditional entry qualification entry qualification for Scottish Universities, the minimum requirement being 4 H grade passes. This is under review under the auspices of *Higher Still* (SCCC 1995) which will see the merger of academic and vocational qualifications in the post-16 curriculum.

Boshier's sample		LISC Learners	
cognitive interest	3.03	professional advancement	2.74
professional advancement	2.28	cognitive interest	2.57
community service	2.18	social stimulation	1.72
social stimulation	1.93	social contact	1.55
social contact	1.89	external expectations	1.54
external expectations	1.72	community service	1.53

(Social stimulation is defined as a negative or deficiency motive such as getting away from boredom or dissatisfaction; social contact is defined as positive or growth oriented, for example, seeking new friends and opportunities.)

The only difference between the LISC groups was that the 4 Access respondents ranked cognitive interest higher than professional advancement (3.56 and 2.84 respectively).

Analysis of learners on other programmes who completed the questionnaire also indicated that cognitive interest and professional advancement were the prime motivators for participation; for some groups, for example employed part-time degree students and non-employed participants there was a statistically significant higher scoring given to cognitive interest over professional advancement. The learners recruited to programmes specifically designated *work-based* were the only group to rank professional advancement above cognitive interest. However, it should be observed that cognitive interest came a very close second to professional advancement for the *work-based* learners.

For our work-based learners motivation to participate appears to involve both career aspirations and intrinsic interest in the subject matter. Designers of work-based opportunities, both providers and employers, need to bear both in mind and hence not view such provision from a too narrowly work-related perspective.

5 CONCLUSIONS AND RECOMMENDATIONS

Throughout the development work and evaluation of that work a range of issues have been identified that informs further development and these are listed below together with a set of recommendations.

5.1 Recruitment of companies to work-based programmes

In general there is no apparent difference between the objectives of companies involved in the LISC project and companies undertaking any form of training and development activities. There are no easy ways of recruiting smaller (or indeed larger) companies to such schemes. Although there are a number of factors that appear to mediate company participation, a number of issues appear to be pre-eminent:

Rapid growth companies tend to recognise that they require a range of skills in their organisations and also that these may not always be evident in their original staff. There are a number of ways that this problem can be solved: replacing existing staff, using outside advisers or developing existing staff to equip them with the skills needed in the growing business (or a combination of all three). Often it is management or other vocationally related programmes that are most needed in these situations.

Recommendation 1: Providers should develop niche products (eg CSMEM) that are particularly relevant to this target group of companies.

Companies in mature markets and in markets where they face intense competition are striving for the means to achieve competitive advantage. They will look to developments such as re-engineering, becoming world class manufacturers, TQM and empowerment to help them survive and prosper. They are likely, therefore, to be in a period of rapid change. It is these types of businesses that are consciously or unconsciously developing learning organisations.

Recommendation 2: Companies in mature markets or in markets where competition is intensive are likely to be looking at ways to stimulate the development of employees. Broadly-based workplace learning and the wider range of types of programmes delivered in LISC have greatest appeal in these organisations and there should be targeting to this market.

However, moderate growth companies or those in the early stage of growth may not recognize the need for the longer term solutions highlighted above. They are looking for rapid pay-back from their training/education. In these situations some of the time-scales involved in workbased learning and certainly the aspects associated with accreditation may act as a deterrent to them undertaking this type of development.

Recommendation 3: The targeting of all growth companies regardless of their stage of growth may not be worthwhile.

The identification of a champion within the company who often may have a strong view that employees' personal development is as important as corporate needs. It is clear that such champions do not exist in the majority of companies, and that where they exist that firm is likely to have a commitment to human resource development through the adoption of a quality framework such as Investors in People.

Recommendation 4: Companies which have a commitment to human resource development through the adoption of a quality framework such as Investors in People are recommended targets for the cornerstones of future initiatives, and clearly more companies must be encouraged to adopt people-centred quality arrangements.

5.2 Recruitment of individuals to programmes

This may be as viable an option as working through companies themselves, and this is the case particularly in relation to programmes within higher education without immediate vocational relevance. Analysis of the motivational characteristics of participants indicates that cognitive development is a strong a factor as self-advancement

Recommendation 5: Work-based learning is one way in which Lifelong Learning with a focus on what the European Commission's White Paper on Education and Training (EC 1995) terms "reintroducing the merits of a broad base of knowledge" can be achieved. It may be that a narrow interpretation of the function of work-based learning may lead to exacerbating the "risk of a rift appearing between those who are able to interpret, those who can only use, and those who can do neither" that the Commission perceives to be possible. Marketing of programmes directly to individuals through conventional means such as newspaper advertising may be more effective in attracting those whose primary motivation is cognitive development.

5.3 Delivery of work-based programmes

Even with the commitment to the programme and the *champions* within, there is little evidence of companies being willing or able to adjust their work loads for employees to assist them to complete. This was the major feature of those who withdrew from programmes and clearly for many of the remainder work commitments has put a strain on their capacity to complete.

The major attributes of work-based learning are relevance, the opportunity to reflect and flexibility of delivery. The methods and procedures for undertaking work-based learning and accreditation do not, however, necessarily ease the strain on companies and individuals undertaking this form of development unless companies are willing to make a commitment to front-end investment in terms of time, finance and human resources. There is a clear danger that work-based learning may be perceived by companies as a quicker and easier method, whereas, in some cases, it can create greater demands than those of conventional courses.

Of particular importance is the existence of appropriate trained individuals within the workplace who can act as learning advisers, and champion developments at a operational level. It is equally important to detect the influence of the *anti-champions* that we have identified in some firms who block development of work-based schemes.

Recommendation 6: Participating companies and learners should not be over sold on this method of education and development and care needs to be taken in examining with them that work-based learning is appropriate to their needs. Whilst emphasis must be placed upon the benefits of learning in the context of work itself the reality of commitment of time and resources must be stressed.

Recommendation 7: *Champions* at various levels within companies must be identified and developed, and those firms with a quality framework are most likely to create a structure to accommodate such arrangements. These structures should also be capable of identifying any impediments created by *'anti-champions'*.

Recommendation 8: Training programmes for learning advisers in smaller companies must be integrated into every work-based learning scheme and it may be that such training should take an accredited form.

Recommendation 9: Alternative methods to those associated with portfolio development need to be further explored. There are opportunities for a mix of more conventional assessment such as assignments based on the workplace, observation and questioning/interview methods to be considered also. We need to find ways of reducing what appears to some participants to be time-consuming and bureaucratic methods of assessment.

5.4 Individual Commitment

The success or otherwise of this approach appears to depend crucially on the commitment of the individual learners. In order to demonstrate appropriate and assessable skills and knowledge, they have to reflect on work practices and to put considerable effort into achieving a satisfactory end result. It appears that some people are not able to adjust to this approach to learning. Where the adjustment to the work-based learning approach is made then it appears that individuals and companies benefit with personal skills and company effectiveness being improved.

Recommendation 10: It is vital that all potential participants in work-based schemes receive appropriate pre-enrolment guidance. It may therefore be advisable to design a pre-start programme for anyone intending to pursue work-based learning to judge their ability to be able to reflect on their work and place into context of the qualification they are taking. The *Recognising Personal Skills* (Dockrell, Seagraves and Neal 1996) questionnaire provides a good model.

5.5 Costs

The rate that companies say they are prepared to pay for these types of development programmes is clearly below the commercial rate of educational institutions and does, therefore, raise issues for the future embedding of the range of courses available for SMEs from institutions. Furthermore, most work-based learning developments have been funded by government awards, but when that money is exhausted institutions have been given no incentives that steers them to continue such activities. If FTE targets can be met by recruiting traditional students to traditional courses then planning using appropriate financial levers may be needed to fulfil any policy to promote work-based provision.

Recommendation 11: It is likely to be difficult to obtain full commercial rate fees for the work-based learning approach with its heavy involvement of individual/personalised tutoring and assessment. The tax break incentives that apply to the obtaining of vocational qualifications should ideally apply to all forms of learning being undertaken or at the very least any work-based activities.

Recommendation 12: Attention by the Scottish Office Education and Industry Department (SOEID) and the Scottish Higher Education Funding Council (SHEFC) to equitable funding of part-time provision (both of institutions and students) and the means by which work-based provision can be calibrated would create the impetus for ongoing developments. It may be that funding councils should offer a greater unit of resource to work-based provision to stimulate supply. One strategy would be to provide a **work-based learning incentive grant** comparable to the part-time incentive grant that SHEFC makes available to institutions.

5.6 Institutional infrastructures

It is important that the institutions are set up to deliver the programmes on offer, have their procedures in place and have champions at strategic and operational level behind the projects. Failure to do this leads to frustration on the part of the learners and eventual antipathy to the whole process of WBL by both learners and employers.

Recommendation 13: Before undertaking any work-based learning and accreditation the Higher or Further Education Institution should ensure that all its procedures are in place and that all members of staff who will implement the programmes are fully committed to the approach.

The expertise and knowledge of Scottish Enterprise Foundation with regard to SMEs and how they operate were particularly appreciated by both the learners and employers in the companies who participated in the CSMEM.

Recommendation 14: The existence of units with a special focus on SMEs working in co- operation with other departments within institutions, particularly those with a remit for the co-ordination of continuing education, is of great benefit.

In the University sector there are extensive initiatives in developing flexible approaches to teaching and learning using new technology, for example the Teaching and Learning Technology Programme (TLTP 1995/1996) and Regional Strategic Initiative (RSI) (SHEFC 1995) developments. As Universities develop increasing numbers of computer based learning programmes, and explore the potential of the Internet for both tutor-student and student-student interaction, new opportunities will open up for work-based learning. This, of course, presents and whole new range of learning needs in helping individuals and companies to adapt to such approaches to learning.

It would be dangerous to presume too much, too soon for new technology. Small companies will adopt new technology at varying rates. Only one of our partner companies has become fully operational with external e-mail and Internet links, and that only recently. There is, therefore, need to continue to develop non-technology based provision. However, there are initiatives to encourage small companies to pursue the use of new technology for developing their own products and markets, and it is not a huge step to accessing training and development.

Recommendation 15: There is no direct recommendation out of the experience of the LISC project, but a strong awareness of the rapid development of new technology. Educational and corporate partners of learning agreements need to adopt and adapt to new technology.

BEST COPY AVAILABLE

MEMBERS OF STEERING GROUP AND FOCUS GROUPS

MEMBERSHIP OF STEERING GROUP

Mansel Griffiths, LGP Ltd (Chair)	- to Sept 1994
Martin McCrindle, OKI (UK) Ltd (Chair)	- from Sept 1994 to Sept 1995
Alison Boyd, Falkirk College	
Chris Brown, SCOTVEC	- to January 1995
Nick Craig, Scottish Distributive Industries Training Council (SDITC)	- to January 1995
Richard Dockrell, Educational Policy and Development	
Myra Duffy, SWAP (West)	
Muriel Dunbar, SCOTVEC	- from January 1995
Jack Earls, Scottish Enterprise	
Alan French, Falkirk College of Technology	
Christina Hartshorn, Scottish Enterprise Foundation	
Jeannette Johnston, Central Region Chamber of Commerce	- to Sept 1994
Ian Lockerbie, Educational Policy and Development	
Anne McNeill, Talkback Training Ltd.	- to January 1995
Robin Magrath, Scottish Enterprise	- to Sept 1995
Bill Marshall, Clackmannan College	
Peter Neal, Project Officer	
Mike Osborne, Educational Policy and Development	
David Pierce, Department for Education and Employment	
Mike Rees, Foseco (UK) Ltd.	- to July 1995
Liz Seagraves, Project Officer	
Norman Sharp, Higher Education Quality Council	
Bob Simpson, Central Region Chamber of Commerce	- from Sept 1994
Lynn Spears, Forth Directions	- from April 1995
Beverly Spencer, Forth Directions/Forth Valley Enterprise	
Dorothy Welch, SWAP (East)	- to Sept 1995
Mike Willis, Taylor Group	

MEMBERSHIP OF FOCUS GROUPS

The Focus groups were set up as sub-groups of the Steering Group, and reporting to the Steering Group, in order to progress the work of the project during the interval between the meetings of the Steering Group and to focus on particular aspects of the project, to a degree not possible within the larger group. Retirement and change of job affected people's membership of the main Steering Group and the Focus Groups.

Employers Group:	Nick Craig, SDITC	- to January 1995
	Mike Rees, Foseco	- to July 1995
	Mike Willis, Taylor Group	
	David Vass, Zeneca FCMO	- to September 1995
	Peter Neal, EPD (LISC project officer)	
Evaluation Group:	Chris Brown, SCOTVEC	- to January 1995
	Muriel Dunbar, SCOTVEC	- from January 1995
	Jack Earls, Scottish Enterprise	
	Mike Osborne, EPD	
	Norman Sharp, Higher Education Quality Council	
	Liz Seagraves, EPD (LISC project officer)	

The Information Technology Group and the Mentoring Groups as detailed in the Interim Report did not extend over the full life of the project. Structural change in one of the partner institutions led to the departure of all of their representatives in the IT group. The Mentoring Group did not meet during the second phase of the project but individuals were consulted during the process of devising the Learning Adviser Guidelines.

PROJECT OUTPUTS AND DISSEMINATION

The contract with the Department for Education and Employment listed a series of projected outputs. These are given below with the details of the actual outputs:

Projected outputs	Actual Outputs
Between 40 to 50 employees of SMEs will gain access to vocational, further or higher education.	Some 46 individuals started out on work-based programmes and 32 have either completed or are currently still involved.
Interim reports to Steering Group once a quarter	Submitted on regular basis to coincide with Steering Group Meetings
Two newsletters to be circulated	Three newsletters were circulated
An intermediate evaluation summary to be presented to the Employment Department (now DfEE) at end of year 1	Interim Report widely distributed (April 1995)
Mid-point symposium at end of year 1	Mid-project seminar held in March 1995
Final Report	March 1996
One-day end of project conference	Held on 6 December 1995
Guidelines on processes and procedures for accreditation of in-company training in SMEs	This area was not addressed: it did not arise as an issue when seeking appropriate programmes for learners
Guidelines on Mentoring	Learning Adviser Support Materials produced
A number of flexible learning packages for use in the workplace	Materials for the delivery of the units of the Certificate in SME Management have been produced by SEF; workplace learning packs for Financial Accounting Statements and IT Applications have been prepared Falkirk College; Workplace Study Skills Guide has been produced by EPD
A series of APL checklists for SMEs	The skills checklist for the Personal Skills Portfolio is included in 'Recognising Personal Skills' and IT checklists have been produced for NC modules and HN Units
A manual on APL materials preparation for SMEs	Guidance on portfolio development is part of both the Learning Adviser Support material and 'Recognising Personal Skills'.
A range of workplace assessment materials	These are an integral part of each of the programmes
Papers and articles for relevant journals and publications	Descriptive articles have appeared in the SFEU 'Broadcast' and the SCOTVEC Journal. Papers were presented at: the UACE Conference at Swansea, April 1995 a Scottish Enterprise 'Skills for Small Business' event in May 1995 the 'Access the Future' Conference in Edinburgh in June 1995 the 'Towards a Learning Workforce' Conference at Lancaster University in September 1995 Presentations have also been made at Griffith University in Queensland, Australia and the Australian National Training Authority (ANTA) An article has been published in the Scottish Journal of Adult and Continuing Education(March 1996) Further articles are in preparation

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Project Publications

LISC Final Report Mike Osborne, Liz Seagraves, Mike Osborne, Peter Neal, Richard Dockrell, Christina Hartshorn, Alison Boyd, March 1996 (£12.50)

LISC Interim Report Mike Osborne, Liz Seagraves, Peter Neal, Richard Dockrell, April 1995 (£7.50)

Supporting Learners in the Workplace: Guidelines for Learning Advisers in Small and Medium Sized Companies Liz Seagraves and Alison Boyd, January 1996 (£15)

Recognising Personal Skills Richard Dockrell, Liz Seagraves and Peter Neal, April 1996 (£7.50)

Workplace Study Skills Guide Peter Neal and Mike Osborne, May 1996 (£10)

Employers Report Mike Willis, Sue Harvey, Douglas Little, with Peter Neal, May 1996

Copies of these publications may be obtained by contacting Educational Policy and Development, University of Stirling, Stirling, FK9 4LA. All prices include packing and postage.

The Certificate in Small and Medium Enterprise Management: A range of open learning materials has been produced to support the Certficate in SME Management. They are an integral part of the course, and as such are not available for purchase. Anyone wishing more information should contact Christina Hartshorn, Scottish Enterprise Foundation, University of Stirling, Stirling, FK9 4LA

Workplace Learning Packs for Financial Accounting Statements and IT Applications: These Packs have been produced to support workplace learning provided by Falkirk College. As they are an integral part of course provision they are not available for purchase. Anyone wishing more information should contact Alison Boyd, Falkirk College of Further and Higher Education, Grangemouth Road, FALKIRK, FK2 9AD.

ISBN 1 85769 039 7